from the substrate. However, to expedite prosecution, Applicants add the limitation --in this order-- after "comprising" in claims 1 and 20.

Claims 1-20 were rejected as being obvious over Takeuchi in view of Ross. The Examiner applies Takeuchi for disclosing a Li-containing glass substrate and Ross for disclosing a NiNb layer. This rejection is respectfully traversed.

"To establish a *prima facie* case of obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art," *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). However, in this case the Examiner has ignored the limitation in claim 1 that "the sealing layer substantially prevents migration of Li from the substrate." This limitation simply cannot be ignored because MPEP 2143 requires that "the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The Examiner might have *assumed* that the prevention of migration of Li from the Li-containing substrate using a NiNb sealing layer would be an inherent function of a NiNb sealing layer. There are two flaws in this logic.

First, this would be an improper obviousness rejection based on inherency because "[o]bviousness cannot be predicated on what is not known at the time of an invention is made, even if the inherency of a certain feature is later established." *In re Rijckaert*, 9 F.2d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). Second, the recognition that the NiNb sealing layer substantially prevents migration of Li from a Li-containing substrate arises from the disclosure of this application, *not* from the prior art.

Takeuchi discloses a glass containing Li, but it fails to disclose a NiNb sealing layer, which even the Examiner acknowledges in paragraph 6 of the Action. The Examiner then states that "Ross et al. teach that adding a NiNb layer onto a glass or ceramic substrate prevents impurities from reaching the magnetic layer and leads to a wide range of laser shapes that can be provided for texturing of the underlayer (col. 3, lines 12-60 and col. 7, 25-35)." After carefully

reviewing Ross, Applicants respectfully submit that the Examiner's understanding of Ross' disclosure is incorrect.

Ross uses NiP or NiNb to form texture layers on a substrate. Nowhere does Ross mention the protection function of NiNb. Instead, Ross only suggests that when "the glass substrate is essentially encapsulated by NiP, ... Na and other impurities cannot reach and corrode the magnetic layer." Column 3, lines 17-19, of Ross. In short, Ross mentions the prevention of migration of impurities by a NiP layer, ***not*** a NiNb layer.

Therefore, even a combination of Takeuchi and Ross would not have taught this invention to a person of ordinary skill in this art because there is ***no*** recognition or suggestion in the prior art that NiNb could substantially prevent the migration of the Li from a Li containing substrate.

The plated NiP layer of Ross is very thick (5-10 micron) in comparison to the thickness of the NiP layer of this invention (0.01-0.1 micron). ***Nowhere*** does Ross disclose that a NiP layer of just 0.01-0.1 micron could have enough protection function for substantially preventing migration of Li from the substrate. A person of ordinary skill would not have been suggested or motivated by Ross to use a NiP layer having 0.01-0.1 micron thickness, which is 0.2-2% of 5 micron, for any reason whatsoever.

The Examiner states on page 4, last paragraph, of the Action, "It would ... have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device the Takeuchi et al. to include a NiNb sealing layer as taught by Ross et al. in order to prevent impurities from reaching the magnetic layer and to allow a wider range of laser shapes for texturing of the underlayer."

As recited in the claims, the use of the NiNb sealing layer in this invention is to substantially prevent migration of Li from the substrate. Neither Takeuchi nor Ross disclose that a NiNb layer can prevent impurities from reaching the magnetic layer. Therefore, the Examiner's first reason to modify the device of Takeuchi by including Ross' NiNb layer "in

order to prevent impurities from reaching the magnetic layer" *lacks* an *objective reason* to combine Takeuchi and Ross as suggested by the Examiner.

Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993), states that a statement that modifications of the prior art to meet the claimed invention would have been "well within ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach all aspects of the claimed invention individually is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings. Applicants recognize that a motivation to combine need not arise from the references but could arise from the knowledge of one of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). While this is correct as a matter of general principle, the law *still* requires that the Examiner must provide "actual evidence" that "must be clear and particular" to show motivation to combine. *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *Id.* In short, an "objective reason" to combine the teachings of prior art *must* be supported by "actual evidence."

For the purposes of determining motivation to combine Takeuchi with Ross, the remaining question that surfaces is:

(1) *Why* would one having ordinary skill in the art have been realistically impelled to deviate from the specific structure and methodology of Takeuchi by inserting a NiNb layer, *in particular*, between the substrate and magnetic layer of Takeuchi "to allow a wider range of laser shapes for texturing the underlayer?" The answer is *not* found in the prior art.

The Examiner has concluded, without evidence, that a person of ordinary skill would have modified the media of Takeuchi to include a NiNb sealing layer "in order ... to allow a *wider range* of laser shapes for texturing of the underlayer." [Emphasis added.] However, the Examiner has *not* provided any *technological basis* or *evidence* upon which to predicate this conclusion.

Applicants stress that the Examiner is charged with the initial burden of making *particular factual findings* as to a *specific understanding* or a *specific technological principle* which would have *realistically* impelled one of ordinary skill in the art to modify the media of Takeuchi to arrive at the claimed invention. *Ecolochem Inc. v. Southern California Edison, Co.*, 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000). In particular, the Examiner *must* present an *objective reason* supported by *actual evidence* as to why a person of ordinary skill in this art at the time of this invention would have made the claimed combination. *Supra, Ex parte Levengood* and *In re Dembiczak.* At this point, there is *no* such objective reason on the record.

The only apparent motivation to use a NiNb on a Li-containing substrate as a sealing layer, wherein the sealing layer substantially prevents migration of Li from the substrate, is found in Applicants' disclosure. This, of course, can not be properly relied upon to support the ultimate legal conclusion of obviousness under 35 USC 103. *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985).

Claims 8 and 17 were rejected as being obvious over Takeuchi in view of Ross and Okumura. This rejection is respectfully traversed.

Foremost, Okumura does not fill the gaps in Takeuchi and Ross, which are discussed above. In addition, the arguments presented in the Action to combine Ross and Takeuchi with Okumura suffer from deficiencies as explained below.

The Examiner acknowledges that "neither Ross et al. nor Takeuchi et al. disclose adding said elements [as those recited in claims 8 and 17] to NiNb." Page 6, line 7, of the Action. Then the Examiner states, "Okumura et al. teach adding encompassing elements to NiP alloys in order to improve the flatness, coercivity and ease of manufacture." Page 6, lines 8 and 9, of the Action. However, the Examiner does *not* explain *why* the use of certain elements to NiP alloys in order to improve flatness, coercivity and ease of manufacture, would have motivated a person of ordinary skill in this art to add these elements to a NiNb sealing layer. After all, the purpose

of the sealing layer is to substantially prevent migration of Li from the substrate, which is totally different from improving flatness, coercivity and ease of manufacture.

Another important point that the Examiner is requested to consider is to note that Ross discloses the use of a NiP layer or a NiNb layer for a texture layer. On the other hand, Okumura discloses the use of a NiP layer for improving flatness. Persons of ordinary skill in this art would have recognized that texturing is *opposite* of improving flatness. This argument shows a lack of consistency in the cited references as to the function and purpose of the NiP and NiNb layers. In short, the effect these references on persons of ordinary skill would have been to simply confuse them, *not* motivate them in any particular manner.

Claims 1-20 were rejected for obviousness-type double patenting over claims 1-20 of Chen in view of Ross. This rejection is respectfully traversed and should be withdrawn for the reasons stated above with respect to the deficiencies in Ross.

In light of the above Amendment, a Notice of Allowance is respectfully solicited.

Attached hereto is a marked-up version of the changes made to the claims by this amendment. The attached pages are captioned "Version with markings to show changes made."

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952,** referencing docket number 14671-20004.00. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: July 9, 2001 By: _____

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